1GHz ACTIVE FET PROBE
USER'S MANUAL (SF-1000)

1. General Safety Summary

To review the following safety precautions to avoid injury and prevent damage to this probe or any products which connected to it.

Observe Maximum Working Voltage

To avoid any injury, do not use the probe above 40V between input lead and earth.

Do Not Operate Without Covers

To avoid electric shock or fire hazard, do not operate this probe with covers removed.

Do Not Operate in Wet/Damp Conditions

To avoid electric shock, do not operate this probe in wet of damp conditions.

Do Not Operate in Explosive Atmosphere

To avoid injury or fire hazard, do not operate this probe in an explosive atmosphere.

Avoid Exposed Circuitry

To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.

Use Proper Power Source

To use 12VDC/100mA mains adapter. Do not operate this probe from a power source that applies more than the voltage specified.

Do Not Operated with Suspected Failures

If you suspect there is damage to this probe, have it inspected by qualified service personnel.

2. Description

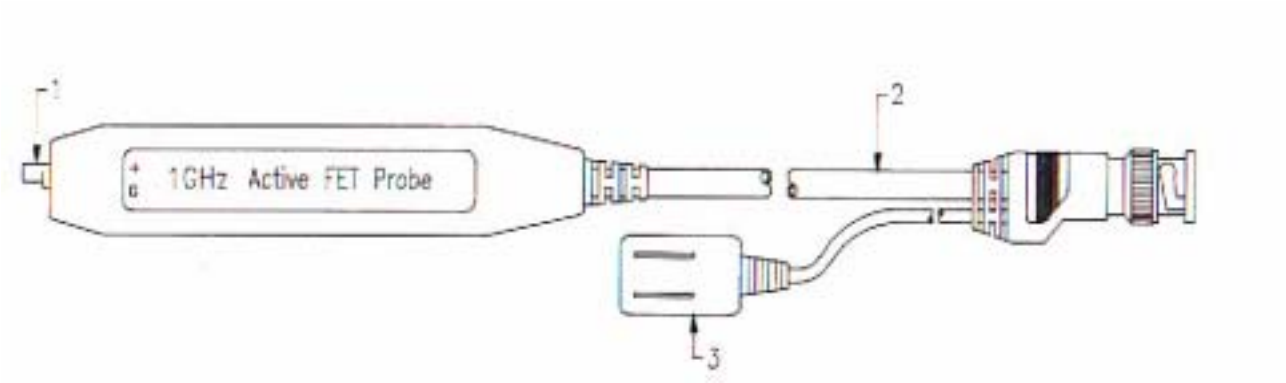
The Active FET Probe provides the high performance probing solution for high-speed oscilloscopes. It features 1GHz probe bandwidth, 2pf typical input capacitance, 1Mohm input resistance and 1/10 attenuation. The probe combines wide bandwidth, low-input capacitance and high-input resistance. This combination allows it to measure high-speed signals without affecting the signal or device under test. Furthermore, the optional accessories and adapter allow for easy attachment to SMDs.

3. Installation

a. Simply plug-in the BNC output connector to the vertical input of a high-speed oscilloscope, and set the input impedance to 50ohm.
b. To connect the 12VDC/100mA mains adapter to the correct line voltage, and then connect its output to the power plug of the Active FET Probe.
c. Adjust the vertical offset (or vertical position) of the high-speed oscilloscopes.

4. Appearance

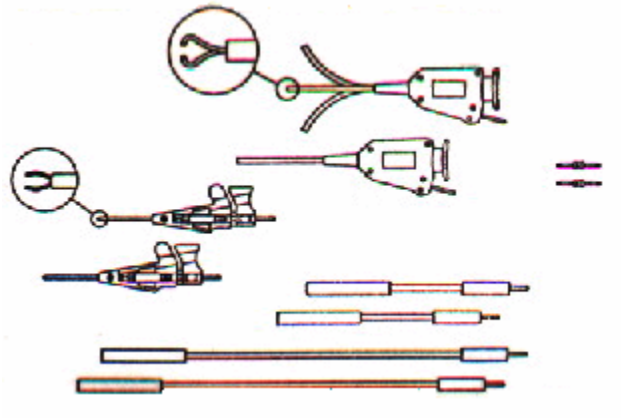
The Active FET Probe looks as follows.



(1) Input Receptacles	The input receptacles of the FET probe can be connected directly to the circuit under test or connected to the accessories that comes with the probe.
(2) Output Lead	The BNC output connector.
(3) Power Plug	The plug connects to 12VDC/100mA mains adapter.

(4) Option Accessory

- SMD Micro tests accessories



Descriptions	Quantity
MicroFlex Pincer, Black	1
MicroFlex Pincer, Red	1
Micro Test Clip, Black	1
Micro Test Clip, Red	1
MicroLead, 0.8mm J-P, 5cm, Black	1
MicroLead, 0.8mm J-P, 5cm, Red	1
MicroLead, 0.8mm J-P, 10cm Black	1
MicroLead, 0.8mm J-P, 10cm Red 1	1
FET Pin, 16.8mm	2
FET Pin, 12.8mm	2
Test Tip, 0.8mm	6

- Feed-through 50ohm BNC Terminator

5. Specifications

Bandwidth	1GHz
Accuracy	+/-2%
Attenuation	1/10
Propagation Delay	5.2ns
Dynamic Range	+/-15V
Absolute Maximum Input Voltage	+/-40V
Input Impedance	1Mohm//2pF
Output Impedance	50ohm
Output Offset	+/-10mV
Power Requirements	12VDC/100mA mains adapter
Length of BNC Cable	1.2M
Ambient Operating Temperature	-10 to 40 degree centigrade
Ambient Storage Temperature	-30 to 70 degree centigrade
Ambient Operating Humidity	25 to 85% RH
Ambient Storage Humidity	25 to 85% RH
Weight	130gms
Dimension (L x W x H)	111mm x 22mm x 14mm

6. Inspection Procedure

a. Connect the BNC output connector to the vertical input of a general purposed oscilloscope, and set the input impedance to 50ohm.

b. Connect mains adapter to the correct line voltage.

c. Set the oscilloscope input coupling to DC and the 0.5V/div. Center the trace on the display.

d. Connect the input pins of the probe to a function generator and select a square-wave output with 10Vp-p amplitude and 100kHz frequency.

e. Then, a 100kHz square-wave of 1Vp-p amplitude will be displayed on the screen of the oscilloscope and this means the probe is working properly.

7. Cleaning

Use a soft cloth to clean the dirt. Prevent damage to probe.

a. Avoid immersing the probe.

b. Avoid using abrasive cleaners.

c. Avoid using chemicals contains benzene or similar solvents.